Unit- II

- ✓ **Research: Meaning, Purpose, and Dimensions.**
- ✓ **Research Method and Methodology**

Meaning of Research

Scientific research is a systematic and objective attempt to provide answer to certain questions.

Kerlinger, "Research is systematic, controlled, empirical and critical investigation of hypothetical propositions about the presumed relations among natural phenomenon".

The Goals/ Purpose of Research

The purpose of scientific research is to discover and develop an organized body of knowledge. Each research study has its own specific purpose.

1. To portray accurately the characteristics of a particular individual, situation or a group. (Descriptive research studies).
2. To gain familiarity with a phenomenon or to achieve new insights into it. (Exploratory or formulative research studies).
3. To predict the research (Predictive Research)
4. To explain the phenomenon or aspect of the study in a detailed way. (Explanatory)
5. Control
6. Application

Control: If you are able to explain why a particular behaviour occurs, you can control that behaviour by making changes in its antecedent conditions. Control refers to three things: making a particular behaviour happen, reducing it, or enhancing it.

SHOUT
SHARE
IT

Dimensions of Research

Dimension- A variable's property or quality.

Example- Physical object have hight, weight, length, depth etc.

Dimensions	Type
Use of research	Basic, Applied
Purpose of the research	Descriptive, relational, explanatory
Time dimension	Cross sectional, longitudinal
Technique for data collection Quantitative Data Qualitative Data	 Experiments, surveys Field research, interviews, content analysis

1. **Use of Research**
   Basic Research

Basic research is also referred to as pure research or fundamental research. Basic research is a type of research approach that is aimed at gaining a better understanding of a subject, phenomenon or basic law of nature. This type of research is primarily focused on the advancement of knowledge rather than solving a specific problem.

Basic research can be exploratory, descriptive or explanatory; although in many cases, it is explanatory in nature. The primary aim of this research approach is to gather information in order to improve one's understanding, and this information can then be useful in proffering solutions to a problem.

Example - A research on behavioural differences between children raised by separated families and children raised by married parents.

Applied Research

Applied research is designed to focus on providing practical solutions to a specific problem. It is a form of investigation that entails solution-oriented inquiries into a phenomenon, a field of study or research subject generally employing empirical methodologies.

Example- Investigating the effectiveness of different treatment approach in reducing anxiety

Difference between Basic and Applied Research

Example

A social psychologist performing basic research on violence might look at how different factors might contribute to violence in general.

A psychologist conducting applied research might tackle the question of what type of programs can be implemented to reduce violence in school settings.

2. Purpose of Research

Exploratory research, as the name implies, intends merely to explore the research questions and does not intend to offer final and conclusive solutions to existing problems. This type of research is usually conducted to study a problem that has not been clearly defined yet.

Conducted in order to determine the nature of the problem, exploratory research is not intended to provide conclusive evidence, but helps us to have a better understanding of the problem. When conducting exploratory research, the researcher ought to be willing to change his/her direction as a result of revelation of new data and new insights.

It focuses on "What" question and generally use qualitative techniques

Example- A study into the role of social networking sites as an effective marketing communication channel

Descriptive Research, it focuses on "How" and "Who" question. These studies are used to describe general or specific behaviours and attributes that are observed and measured.

Descriptive research is designed to create a snapshot of the current thoughts, feelings, or behaviour of individuals. In this type of research, case studies, surveys, and naturalistic observation techniques are used

Example- political polls, Detailed study of patients or how children and young adults interact.

Explanatory Research

Explanatory Research is conducted in order to help us find the problem that was not studied before in-depth. Explanatory research is not used to give us some conclusive evidence but helps us in understanding the problem more efficiently.

Explanatory research is actually a type of research design that focuses on explaining the aspects of your study.

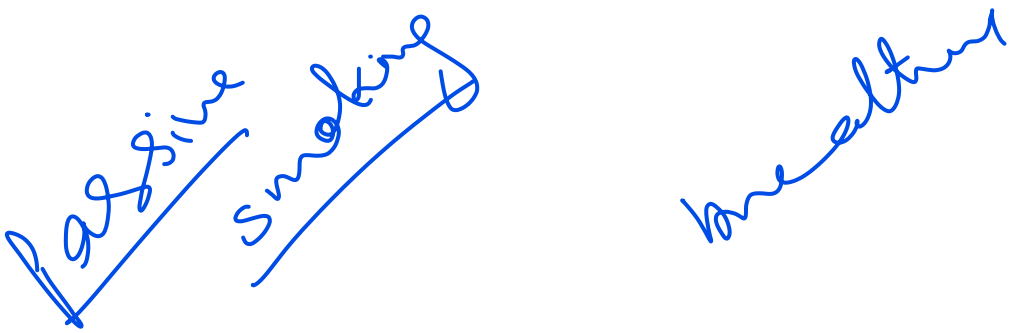
this type of research focuses on "WHY" question.

3. Time Dimension

Cross-Sectional Studies

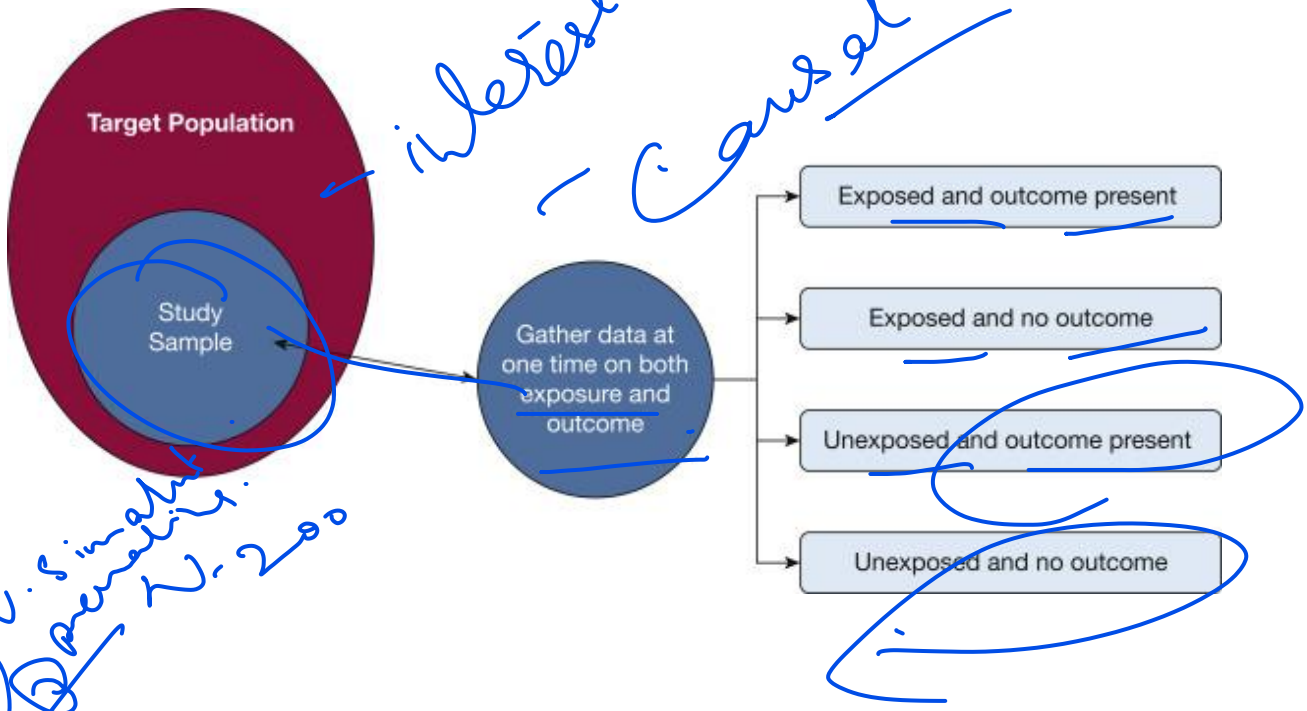
A cross-sectional study involves looking at data from a population at one specific point in time. The participants in this type of study are selected based on particular variables of interest. Cross-sectional studies are often used in developmental psychology.

Cross-sectional studies are observational in nature and are known as descriptive research, not causal or relational, meaning that you can't use them to determine the cause of something, such as a disease. Researchers record the information that is present in a population, but they do not manipulate variables.



Some of the key characteristics of a cross-sectional study include:[1]

- The study takes place at a single point in time
- It does not involve manipulating variables
- It allows researchers to look at numerous characteristics at once (age, income, gender, etc.)
- It's often used to look at the prevailing characteristics in a given population
- It can provide information about what is happening in a current population


Target Population
Study Sample
Gather data at one time on both exposure and outcome
Exposed and outcome present
Exposed and no outcome
Unexposed and outcome present
Unexposed and no outcome

Longitudinal Studies

A longitudinal study is a type of correlational research study that involves looking at variables over an extended period of time. This research can take place over a period of weeks, months, or even years. In some cases, longitudinal studies can last several decades. This observational research technique involves studying the same group of individuals over an extended period.

Longitudinal studies are usually observational in nature, and are a type of correlational research. Longitudinal research is often contrasted with cross-sectional research. While longitudinal research involves collecting data over an extended period of time, cross-sectional research involves collecting data at a single point in time.

Major types of longitudinal studies:

- **Panel study**: Involves sampling a cross-section of individuals.
- **Cohort study**: Involves selecting a group based on a specific event such as birth, geographic location, or historical experience.
- **Retrospective study**: Involves looking to the past by looking at historical information such as medical records
- **Case studies**: Involves in depth many features of few cases over a long duration of time. the data collected includes very detailed and personal information about the individual or group.

4. Techniques for Data Collection

Qualitative methods

Qualitative research is the methodology researchers use to gain deep contextual understandings of users via non-numerical means and direct observations. Researchers focus on smaller user samples—e.g., in interviews—to reveal data such as user attitudes, behaviours and hidden factors: insights which guide better designs.

Example- Interview, Focused Group Discussion

Quantitative methods

Quantitative research is the methodology which researchers use to test theories about people's attitudes and behaviours based on numerical and statistical evidence. Researchers sample a large number of users (e.g., through surveys) to indirectly obtain measurable, bias-free data about users in relevant situations.

Example – Experiments, Surveys

Research Method and Research Methodology

Research Method

we mean all those methods and techniques which is used in the conduction of the research.

three categories-

i. Collection of data
ii. Statistical techniques
iii. Evaluation of accuracy of the result

Research Methodology

Study of method / set of methods

The science of studying how the research is conducted.

Categories

i. How to develop certain tests to be employed
ii. How to calculate various statistics
iii. Relevancy of the techniques to be used
iv. Specifies the rationale behind the research problem, hypothesis Formulation and techniques being used to analyse data.

Difference between Methods and Research Methodology

Research Method	**Research Methodology**
The objective of methods is to find solution to the research problem. The scope is narrower It is One dimensional	The objective of methodology is to determine appropriateness of the methods applied with a view to ascertain solution. The scope is wider It Contains many dimensions
Methods are applied during the later stage of the research study.	Methodologies are applied during the initial stage of the research process.
Methods encompasses of carrying out experiments, conducting surveys, tests, etc.	Methodology encompasses several techniques used while conducting these experiments, surveys, tests, etc.
Example- Survey, Enquiry	**Example-** Participatory, Phenomenology